CLAIM AMENDMENTS

Claim Amendment Summary

Claims pending

- Before this Amendment: Claims 1-5, 7, 10-15, 17, 20-25, 27, and 30.
- After this Amendment: Claims 1-5, 10-15, 17, 20-23, 25, 27, and 30-34.

Canceled claims:

- Before this Amendment: Claims 6, 8, 9, 16, 18-19, 26, and 28-29.
- In this Amendment: Claims 7, 24, and 27.

Amended claims: 1, 4, 11, 12, 13, 14, 15, 17, 21, 22, 23, and 25.

New claims: 31-34.

Claims:

1. **(Currently Amended)** A method for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, ~~and said algebrizing comprising a plurality of operations each of which can be performed in a single pass through said syntax tree representation, said~~ the method comprising ~~the step of~~ performing at least two operations in a single pass through ~~said~~ the syntax tree representation, wherein at least one of the ~~one of the~~

operations ~~being constant folding~~ is selected from a group of operations comprising:

    table and column binding;

    aggregate binding;

    type derivation;

    constant folding;

    property derivation; and

    tree translation.

    2. (Original) The method of claim 1 wherein said at least two operations are executed in a predetermined order at each of said plurality of nodes.

    3. (Original) The method of claim 2 wherein

    said at least two operations comprise a first operation and a second operation; and

    said second operation either executes or does not execute at each of said plurality of nodes and after said first operation based on a result from said first operation.

4. (Currently Amended) The method of claim 1 wherein <u>one of </u>said at least two operations comprises ~~at least one operation from among a group of operations, said group of operations comprising: table and column binding; aggregate binding; type derivation;~~ constant folding~~; property derivation; and tree translation.~~

5. (Original) The method of claim 1 wherein said at least two operations comprises at least all operations from among a group of operations, said group of operations comprising: table and column binding; aggregate binding; type derivation; property derivation; and tree translation.

6-9. (Canceled)

10. (Original) A method for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, and said algebrizing comprising a plurality of operations, said method comprising the inclusion of constant folding as an operation among said plurality of operations.

11. (Currently Amended) A system for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, said system comprising:

a plurality of operations, wherein at least one of the plurality of operations is selected from a group of operations, the group of operations comprising:

table and column binding;

aggregate binding;

type derivation;

property derivation; and

tree translation; and

a subsystem for performing at least two of the plurality of operations in a single pass through said syntax tree representation, ~~one of the operations being constant folding~~.

12. (Currently Amended) The system of claim 11 wherein said system executes the at least two of the plurality of operations in a predetermined order at each of said plurality of nodes during said single pass through said syntax tree representation.

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13. (Currently Amended) The system of claim 12 wherein

said at least two <u>of the plurality of</u> operations comprise a first operation and a second operation;

said subsystem executes said first operation before said second operation at each of said plurality of nodes, and receives a result from said first operation at each of said plurality of nodes; and

said subsystem either executes or does not execute said second operation at each of said plurality of nodes, on a node by node basis, based on a result from said first operation.

14. (Currently Amended) The system of claim 11 wherein <u>each of</u> said at least two <u>of the plurality of</u> operations <u>are selected from the</u> ~~comprises at least one operation from among a~~ group of operations~~, said group of operations comprising: table and column binding; aggregate binding; type derivation; constant folding; property derivation; and tree translation.~~

15. (Currently Amended) The system of claim 11 wherein said at least two ~~of the plurality of~~ operations comprises at least all ~~of the group of~~ operations ~~from among a group of operations, said group of operations comprising: table and column binding; aggregate binding; type derivation; property derivation; and tree translation.~~

16. (Canceled)

17. (Currently Amended) The system of claim 11 wherein said algebrizing comprises <u>one or more of:</u>

~~at least one operation from among a group of operations, said group of operations comprising:~~ table and column binding;

aggregate binding;

type derivation;

constant folding;

property derivation; ~~and~~ <u>or</u>

tree translation.

18. (Canceled)

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19. (Canceled)

20. (Original) A system for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, said system comprising:

a plurality of operations; and

constant folding as an operation among said plurality of operations.

21. (Currently Amended) A computer-readable medium comprising computer-readable instructions for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, ~~and said algebrizing comprising a plurality of operations each of which can be performed in a single pass through said syntax tree representation,~~ said computer-readable instructions comprising instructions for performing ~~at least two operations in a single pass through~~ constant folding on said syntax tree representation~~, one of the operations being constant folding~~.

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22. (Currently Amended) The computer-readable instructions of ~~claim 21~~ claim 34, further comprising instructions for <u>performing the plurality of</u> ~~at least two~~ operations ~~to be executed~~ in a predetermined order at each of said plurality of nodes.

23. (Currently Amended) The computer-readable instructions of claim 22, <u>wherein the plurality of operations</u> ~~further comprising instructions for~~ ~~at least two operations to~~ comprise a first operation and a second operation; and <u>wherein the computer-readable instructions further comprises instructions for</u> executing or not executing said second operation at each of said plurality of nodes after said first operation has executed based on a result from said first operation.

24. (Canceled)

25. (Currently Amended) The computer-readable instructions of ~~claim 21~~ claim 34, wherein the plurality of operations ~~further comprising instructions whereby said at least two operations~~ comprises at least all operations from among ~~a~~ the group of operations~~, said group of operations comprising: table and column binding; aggregate binding; type derivation; property derivation; and tree translation~~.

26-29. (Canceled)

30. (Original) A computer-readable medium comprising computer-readable instructions for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, and said algebrizing comprising a plurality of operations, said computer-readable instructions comprising instructions for constant folding as an operation among said plurality of operations.

31. (New) The method of claim 5 wherein said group of operations further comprises constant folding.

32. (New) The system of claim 11 wherein said group of operations further comprises constant folding.

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33. (New) The system of claim 15 wherein said group of operations further comprises constant folding.

34. (New) The computer-readable instructions of claim 21 further comprising instructions for performing a plurality of operations in a single pass through the syntax tree representation, wherein at least one of the plurality of operations is selected from a group of operations comprising: table and column binding, aggregate binding, type derivation, property derivation, constant folding, and tree translation.